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EXAMINER	
WILSON, KAITLIN A	

ART UNIT	PAPER NUMBER
3609	

NOTIFICATION DATE	DELIVERY MODE
08/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/526,432	YASUDA ET AL.	
	Examiner	Art Unit	
	Kaitlin A. Wilson	3609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15,17-20 and 22-24* is/are rejected.

7)☒ Claim(s) *16, 21 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03/03/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/04/2005 05/30/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 4,6,8-9,17,20,22-23 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language used within the claims is considered to be unclear as to what structure is being claimed. The associated language is as follows:

- Claim 2: there is no prior mention of "the tension" within the claims and it is not clear which "tension" is meant
- Claim 4: pulls a rear end of the planar tension structure, whose front end is fixed to the frame for the sitting portion, rearward while moving the rear end forward
- Claim 6: sitting arises rearward of a front-rear direction central potion at the time for sitting
- Claim 8: urges downward a portion further rearward than the front-rear direction central portion; forward than the front-rear direction central portion
- Claim 9: pulls forward one end portion of the planar tension structure.... at different positions with respect to a heightwise direction
- Claim 17: including a lower layer portion stretched in a front-rear direction
- Claim 20: is provided further forward than a front-rear direction portion of the cloth spring material

- Claim 22: portions between a left-right direction central portion which supports the seated person and left-right direction both end portions, elongate in a left-right direction more easily than the central portion and the both end portions
- Claim 23: wherein the portions between the left-right direction central portion and the left-right direction both end portions include elastic members which elongate more easily than the central portion and both end portions
- Claim 25: vary continuously along a front-rear direction of the frame for the sitting portion or a top-bottom direction of the frame for the back portion

Because of this the examiner cannot understand what the applicant intends to claim as his/her inventor. The directions cited within the claims are confusing and it is not clear to the examiner how to interpret these claims. Within claim 4, it is stated that the planar tension structure rear end is pulled rearward while being pulled forward, which is not considered to be possible. If exact locations or axis are being claimed then these should be noted with reference characters and the claim language made clear so one of ordinary skill in the art at the time the invention was made can fully understand the invention and its limitation.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. As best understood, Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Fujita et al. (US Patent 6,302,487 B1).

5. In re Claim 17, with reference to Figures 9,16 and 17 Fujita et al. ('487) discloses a seat comprising:

- a frame for a sitting portion (10)
- a cushion material including a lower layer portion (15) stretched in a front-rear direction at the frame for the sitting portion (10), and a surface layer portion layered on the lower layer portion and stretched at the frame for the sitting portion (10) (col. 13, lines 13-18); and
- a tension adjusting mechanism (11,12 and 13) connecting connection positions at the lower layer portion (15) in vicinities of beneath ischial tuberosities of a seated person and portions at the frame for the sitting portion (10) which portions are lower than the connection positions, and generating tensile force at a time of sitting.

Fig. 9

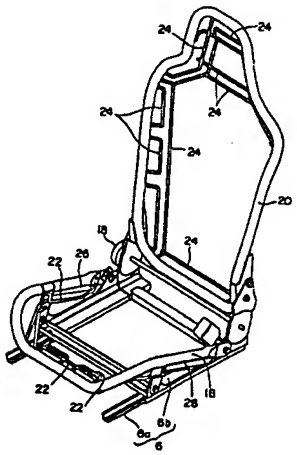


Fig. 16

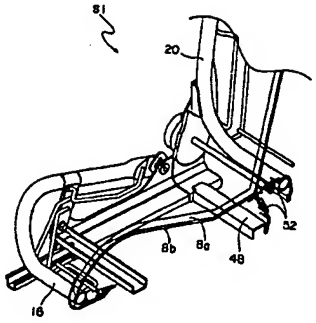
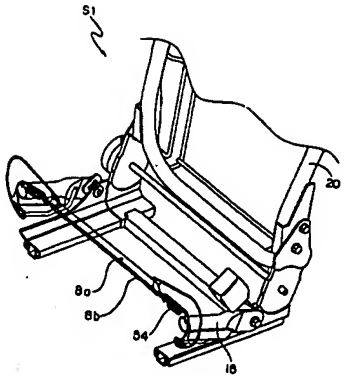


Fig. 17



6. As best understood, Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Yokota (US Patent 5,044,693).

7. In re Claim 18, with reference to Figures 1 and 2,Yokota discloses a seat comprising:

- a frame for a back portion (16);
- a cushion material including a lower layer portion (4)stretched at the frame for the back portion (16) at a portion corresponding to a region between a lower side of shoulder blades and a lumbar vertebrae region of a seated person, and a surface layer portion (31 and 32) layered on the lower layer portion and stretched at the frame for the back portion; and
- a tension adjusting mechanism (17) connecting at least one connection position at the lower layer portion among a connection position further upward than beneath the shoulder blades and a connection position further downward than the lumbar vertebrae region, and the frame for the back portion, and generating tensile force which pulls the lower layer portion rearward at a time of sitting.

FIG.1

PRIOR ART

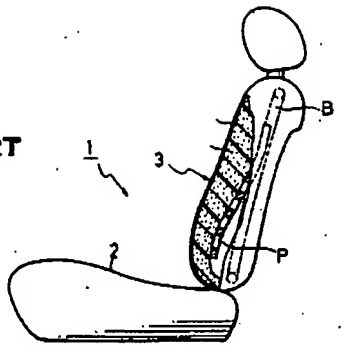
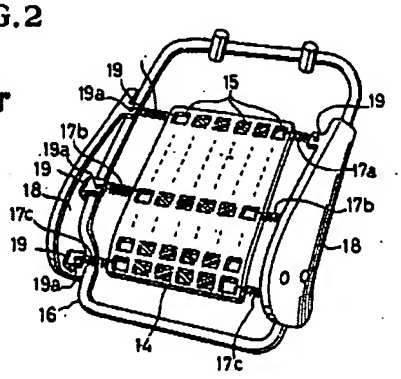


FIG.2

PRIOR ART



8. As best understood, Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Fujita et al. (US Patent 6,854,805 B2).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

9. In re Claim 19, Fujita et al. ('805) disclose a seat comprising:

- a seat frame (14) having a fixed frame (10a), and a movable frame (11,12, and 13) provided at a rear portion of the fixed frame (10) so as to be able to move in a front-rear direction;

- a cushion material (15) having a cloth spring material whose front end portion (15c) is anchored at the fixed frame and whose rear end portion (15a) is anchored at the movable frame (11,12 and 13), and a surface layer portion layered on the cloth spring material and stretched at the fixed frame (col. 13, lines 13-18);
- an urging member (13) provided between the fixed frame (10a) and the movable frame (11,12, and 13), and, at a time of sitting, urging the movable frame rearward and adding tension to the cloth spring material (15); and

10. a tension adjusting mechanism (16) connecting connection positions which are at the cloth spring material (15) and are in vicinities of beneath ischial tuberosities of a seated person and are further outward and rearward than beneath the ischial tuberosities, and portions at the fixed frame (10a) which portions are further rearward and downward than the connection positions, the tension adjusting mechanism (16) generating tensile force at the time of sitting.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. As best understood Claims 1-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Fujita et al. (US Patent 6,854,805 B2).

13. In re Claim 1, with reference to Figures 9,16 and 17 Fujita et al. ('487) disclose a seat (S) comprising:

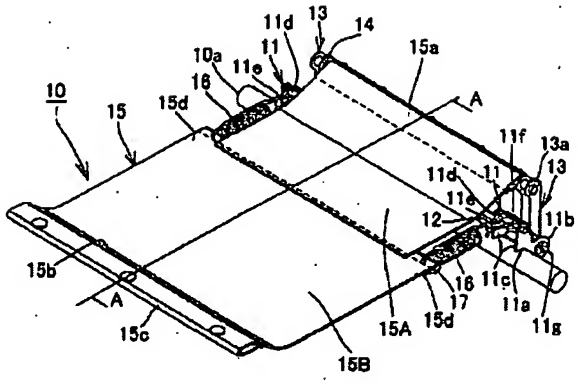
- a seat frame having a frame for a sitting portion (2) and a frame for a back portion (4);
- a planar tension structure (8) attached to the flame for the sitting portion (2) or the frame for the back portion (4); and

14. Fujita et al. ('487) fails to disclose an elastic supporting structure supporting the planar tension structure, between the frame for the sitting portion or the frame for the back portion and the planar tension structure, such that directions of tension are in three dimensions.

15. However with reference to Figure 1, Fujita et al. ('805) discloses a seat structure (10)with a flat-type supporting member (15), which is supported with the support frame (14)at a rear end portion (15a) and is strained in the longitudinal direction of the seat (10).

16. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the seat structure as taught by Fujita et al. ('805), since Fujita et al. ('805) states at column 1 lines 13-18 that such a modification would obtain better ride comfort, improvement of various functions such as physique difference absorbency, posture difference absorbency, body movability and so on.

FIG. 1



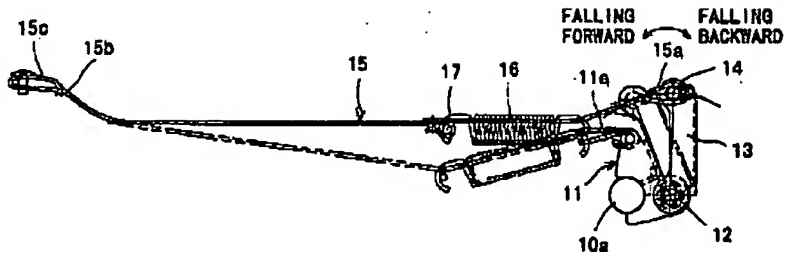
17. In re Claim 2, as best understood, Fujita et al. ('487) disclose that the tension is formed of a tension, which two-dimensionally supports the planar tension structure, and a pseudo normal line direction force, which is a force in a direction intersecting the tension (col. 8, lines 19-29).

18. Through the tension of the seat structure of the 2-D net disclosed and the combination with the 3-D net and torsion bar structure of Fujita et al. ('805), the tension would inherently be three-dimensional in a normal line direction force.

19. In re Claim 3, with reference to Figure 1, Fujita et al. ('805) inherently disclose a direction of the pseudo normal line direction force is a direction along a vertical plane including a front--rear direction of the seat due to the rotation of the torsion bar (12) and tightening of the support plates (15).

20. In re Claim 4, with reference to Figure 4, Fujita et al. ('805) disclose a first elastic member (12) which, at the time of sitting pulls a rear end of the planar tension structure rearward.

F I G. 3



21. In re Claim 5, with reference to Figure 4, Fujita et al. ('805) disclose a second elastic member (13), which is provided between the frame for sitting portion (14) and the planar tension structure, and which at the time of sitting pulls downward vicinities of a seated person at the planar tension structure (col. 10, lines 64-67).

22. With reference to Figure 9, Fujita et al. inherently discloses that the vicinities would be beneath the ischial tuberosities of a seated person.

23. In re Claim 6, with reference to Figure 4 and 9, Fujita et al. inherently disclose that the second elastic member (13) pulls the planar tension structure such that maximum flexing at the time of sitting arises rearward of a front-rear direction central portion at the time of sitting.

24. In re Claim 7, Fujita et al. ('805) inherently disclose that the elastic supporting structure (15) includes a third elastic member (16) which is provided between the frame for the sitting portion (14) and the planar tension structure and which at the time of sitting pulls rearward portions at outer sides of a pelvic of a seated person at the rear end of the planar tension structure.

25. In re Claim 9, with reference to Figure 2, Fujita et al. ('487) discloses that the planar tension structure (4) is attached to the frame for the back portion.

26. In re Claim 10, Fujita el al. ('487) discloses using a three-dimensional hammock structure, but fails to disclose including a two-dimensional tension structure.

27. However, Fujita et al. ('805) discloses using both a two-dimensional net member (15) and a three-dimensional net member.

28. It would have been obvious to one having ordinary skill in the art at the time the invention was made to two and three dimensional net structures as taught by Fujita et al. ('805), since Fujita et al. ('805) states at column 13 lines 13-18 that such a modification would allows for the two dimensional net structure to be used as a flat type supporting member and the three dimensional structure as a cushion layer.

29. As best understood, Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Fujita et al. (US Patent 6,854,805 B2), and further in view of Berg et al. (US Patent 6,079,782).

30. In re Claim 8, Fujita et al. discloses the tension adjusting mechanism which pushes a portion downward at the end of the planar tension structure, but fails to disclose that a portion to the front of the planar tension structure is pushed upward.

31. However, Berg et al. disclose a seat construction, which corrects pelvis alignment with support plate (14 and 16) with elastic means (32). At the time of sitting the spring (32) act to apply an upward force.

32. It would have been obvious to one having ordinary skill in the art at the time the invention was made to the support plates (14,16) and elastic means (32) by Berg et al.,

since Berg et al. states in the abstract that such a modification would correct the pelvis so that it influences a proper alignment of the body.

33. In re Claim 11, Fujita et al. discloses a tension adjusting mechanism (12) mitigating top-bottom direction tension of the planar tension structure (15), but fails to disclose including a support plate to rotate rearward.

34. However, Berg et al. disclose a seat construction, which corrects pelvis alignment with support plate (14 and 16) with elastic means (32).

35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to the support plates (14,16) and elastic means (32) by Berg et al., since Berg et al. states in the abstract that such a modification would correct the pelvis so that it influences a proper alignment of the body.

36. As best understood, Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Fujita et al. (US Patent 6,854,805 B2).

37. In re Claim 12, with reference to Figures 9,16 and 17, Fujita et al. ('487) disclose a seat (S) comprising:

- a seat frame having a frame for a sitting portion (2) and a frame for a back portion (4);
- a cushion material including a two-dimensional knit fabric or a three-dimensional solid knit fabric (8) stretched at the frame for the sitting portion (2) or the frame for the back portion (4); and

38. Fujita et al. ('487) fails to disclose a tension adjusting mechanism, adjusting tension such that force in a pushing direction arises at a region of the cushion material that a specific region of a human body pushes at a time of sitting.

39. However, Fujita et al. ('805) discloses having a seat bottom (14) with a tension adjusting mechanism (11,12 and 13) and adjustable seat structure (15 and 16).

40. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the seat structure as taught by Fujita et al. ('805), since Fujita et al. ('805) states at column 1 lines 13-18 that such a modification would obtain better ride comfort, improvement of various functions such as physique difference absorbency, posture difference absorbency, body movability and so on.

41. In re Claim 13, with reference to Figure 10, Fujita et al. ('805) the tension adjusting mechanism (11,12,and 13) includes a connecting member (15) which connects the seat frame (14) and a portion of the cushion material (15) corresponding to the region that the specific region of the human body pushes, and which functions as an elastic member which generates tensile force at the time of sitting.

42. In re Claim 14, Fujita et al. ('805) discloses an urging member (16) that is provided which urges, in a direction opposite to the pushing direction by the human body at the time of sitting, a region at the cushion material which region is other than a region which is pulled by the connecting member (15).

43. In re Claim 15, Fujita et al. ('805) disclose that the urging member (16) is a compression spring (col. 8, lines 46-65).

44. As best understood, Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,854,805) in view of Berg et al. (US Patent 6,079,782).

45. In re Claim 20, Fujita et al. ('805) disclose the seat as described above, but fails to disclose a pushing member which pushes the cloth spring material from a lower side at the time of sitting which is provided further forward than a front-rear direction central portion of the cloth spring material.

46. However, Berg et al. discloses a seat construction, which corrects pelvis alignment with support plate (14 and 16) with elastic means (32). At the time of sitting the springs (32) push the cloth material from a lower side.

47. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the support plates (14,16) and elastic means (32) by Berg et al., since Berg et al. states in the abstract that such a modification would correct the pelvis so that it influences a proper alignment of the body.

48. As best understood, Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Fujita et al. (US Patent 6,854,805 B2).

49. In re Claim 22, Fujita et al ('487) discloses the seat as described above, with three-dimensional and two-dimensional net fabrics, but fails to disclose that they stretch in one direction and not the other.

50. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a net that stretches in one direction since it was known in the art that net fabrics stretch more in one direction than the other.

51. In re Claim 23, Fujita et al. ('487) discloses the seat as described above, but fails to disclose the addition of elastic members that stretch more easily than the central portion.

52. However, with reference to Figure 27, Fujita et al. ('805) disclose the use of three-dimensional netting that results in high tension, low tension and middle tension portions.

53. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the three-dimensional netting with high low and middle tension portions as taught by Fujita et al. ('805), since Fujita et al. state col. 1, lines 12-16in the abstract that such a modification would obtain better ride comfort.

54. In re Claim 24, Fujita et al. ('805) discloses that the elastic members are a three-dimensional net (15).

Allowable Subject Matter

55. Claims 16 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

56. Claim 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

57. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Granger (US Patent 199,535) discloses plates with springs disposed below them . Fujita et al. (US Patent Application 2002/0034901 A1) discloses a three-dimensional net fabric. Nishino et al. (US Patent Application 2002/0060493 A1) discloses a seat with pressure dispersion. Fujita et al. (US Patent Application 2002/0096932) discloses a seat structure with side and rear elastic support members. Mednick (US Patent 3,117,817) discloses that net fabrics primarily stretch in only one direction. Geller et al. (US Patent 3,273877) discloses a front seat tensioning structure. Ogura et al. (US patent 6,489,000 B1) discloses a cushion having a three-dimensional net.

58. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaitlin A. Wilson whose telephone number is (571)-270-3206. The examiner can normally be reached on Monday - Friday (7:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571)272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

59. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kaitlin Anne Wilson

GEORGE B. NGUYEN
SUPERVISORY PATENT EXAMINER